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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re PATENT APPLICATION OF

Yao et al.

Application No. 09/989,497

Filed: November 21, 2001

BOX SEQUENCE

Group Art Unit: 1646

Examiner:

Title: Gαq Protein Variants and Their Use in the Analysis and Discovery of Agonists and Antagonists of Chemosensory Receptors

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PRELIMINARY AMENDMENT

Hon. Commissioner of Patents
Washington, D.C. 20231

Sir:

In response to the Notice to File Missing Parts of Nonprovisional Application dated December 5, 2001, Applicants hereby submit a "Sequence Listing" in computer readable format along with a Statement to Support Filing and Submission in Accordance with 37 C.F.R. §1.821-1.825, and request amendment of the subject application as follows:

IN THE SPECIFICATION:

Please amend the specification to read as follows. A copy of the amended paragraphs with markings to show changes made is attached hereto.

In the section entitled "Brief Description of the Figures":

[0013] Figure 1 illustrates the alignment of amino acid sequences of human $G\alpha_q$, $G\alpha_s$ and $G\alpha_{16}$ (SEQ ID NOs:37-39, respectively) by the Clustal method.

[0014] Figure 2 illustrates the amino acid sequences of mouse (SEQ ID NO:1) and human $G\alpha_q$ (SEQ ID NO:37). Significant amino acids described herein are boxed and differences between human and mouse are underlined.

[0015] Figure 3 illustrates the amino acid sequences of mouse (SEQ ID NOs:1-14) and human (SEQ ID NOs:15-16) $G\alpha_q$ proteins according to the invention. The variations of the amino acids of $G\alpha_q$ are depicted in parenthesis. The sequence

numbers of amino acid H or Q, V or L are 28 and 29 respectively. The sequence number of amino acid G or D is 66. Truncation of N-terminal six amino acids (MTLESI) (SEQ ID NO:40) are shown as ΔN. Hemaglutinin (HA) epitope tag (DVPDYA) (SEQ ID NO:41) spans from 125 to 130. C-terminal five amino acids (-t5) or 44 amino acids (-t44) of transducin and five amino acids of $G\alpha_{olf}$ (-olf5) are used respectively to replace those of $G\alpha_q$.

[0016] Figure 4 illustrates additional amino acid sequences according to the invention (SEQ ID NOs:17-26).

In the section entitled "Materials and Methods":

[0040] The Ga15 chimeras were generated by PCR with mutagenic 3' primers. The sequence of our Ga15 clone corresponds to databank sequences (e.g., accession BC005439) except for a silent single nucleotide polymorphism shown in bold underline below. The last six codons of Ga15 and the sequences they were replaced with are shown in italic underline below. The Ga15 chimeras were generated with 5' AscI sites (GGCGCGCCgcc (SEQ ID NO:42) joined to the start ATG) and 3' NotI sites (GCGGCCGC joined to the stop TGA) and cloned as AscI-NotI fragments in the AscI-NotI polylinker sites of the pEAK10 expression vector (Edge Biosystems).

REMARKS

Applicants respectfully submit that the afore-identified amendments add no new matter to the subject application.

Applicants also respectfully submit that the content of the sequence listing information recorded in computer readable form is identical to the written sequence listing submitted herewith and includes no new matter.

Respectfully submitted,

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Enclosure: Statement to Support Filing
Sequence Listing (including electronic copy)

30268145_1.DOC

AMENDMENTS WITH MARKINGS TO SHOW CHANGES

In the section entitled "Brief Description of the Figures":

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